

Center for Domestic Preparedness

Market Survey for Responder Assessment/Validation of User Equipment (RAVUE) – Extrication Devices

Submitted by:

Office for Domestic Preparedness Department of Homeland Security 61 Responder Drive PO Box 5100 Anniston, Alabama 36205

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Introduction and Background

The System Support Division (SSD) of the Office for Domestic Preparedness (ODP) has been assigned the responsibility for developing and providing emergency response equipment information that may be used by federal, state, and local jurisdictions in procuring emergency response equipment. The goal of this process is to assist procurement decision-makers in making to make better use of federal Homeland Security grants intended to improve responder readiness. The ODP goal is to provide easy-to-read and easy-to-understand information in a *Consumer Reports*® type format that will allow federal, state, and local officials to make better informed decisions when purchasing emergency response equipment.

To develop the needed comparative field assessments for commercially available products, the SSD and its program partners have established the ODP Systems Assessment/Validation for Emergency Responders (SAVER) program. An element of the SAVER program is the Center for Domestic Preparedness (CDP) *Responder Assessment/ Validation of User Equipment (RAVUE)* program to assess end-user functionality and efficacy during a Weapon of Mass Destruction (WMD) incident. This CDP process was presented in the User Test and Evaluation (UTEP) for WMD Equipment and Technologies Concept Paper dated March 2004, which serves as the CDP programmatic guide for the RAVUE program.

In concert with the ODP-SSD, the CDP has identified emergency response extrication devices to support the movement of mass casualties from the Hot Zone of a WMD incident as the initial category of responder equipment to be assessed at the CDP. Concurrent with the conduct of the Market Survey described below, a Responder Focus Group was conducted on April 7, 2004, to determine the evaluation criteria for these extrication devices. Preliminary preparations of the Extrication Devices Test Plan scenarios are underway to incorporate the selected extrication devices into this comparative field assessment.

The following sections of this Market Analysis present the methodology used in soliciting vendor recommendations for their products to be included in this extrication devices assessment. As pointed out in this report, several vendor proposals did not conform to the type of equipment to be assessed, i.e., aircraft landing lights, straps, and medical treatment splints. Therefore, they are not recommended for inclusion in this comparative assessment.

Market Survey Scope and Methodology

Several methods described in Section 10.002 of the Federal Acquisition Regulation were employed to identify manufacturers of extrication devices. Methods included an extensive Internet search, a review of applicable response equipment catalogs and other product literature published by manufacturers, as well as personal interviews with emergency responders. A Sources Sought Notice was posted on the Vendors Federal Business Opportunity website with a suspense of thirty days. Additionally, letters were sent to 26 vendors inviting them to nominate their extrication devices for RAVUE assessment. (See Appendix A for the list of manufacturers contacted, Appendix B for a copy of the letter, and Appendix C for a copy of the Sources Sought Notice.)

The list of potential vendors to whom solicitation letters were sent was developed through:

a. Responder Interviews:

- (1) Mr. Jeff Monroe, former Fire Chief of Lanette Fire Department, Lanette, Alabama. Mr. Monroe is currently the Deputy Program Manager at the Center for Domestic Preparedness. He provided source information on the Stryker Corporation; Reeves Group, Incorporated; Ferno-Washington, Incorporated; and Iron Duck, a Division of Fleming Industries.
- (2) Contacted Fran Byrd, the Incident Commander for the Calhoun County Hazardous Material Team. He suggested contacting the Dynamed Corporation. However, Dynamed Corporation is not an extrication device manufacturer.

b. Web Searches:

- (1) Researchers queried the government-wide database of contracts (www.contractdirectory.gov). A search of the database for extrication devices produced 1,691 records matched. However, the majority of the search results were not manufacturers of extrication devices. Fourteen possible companies were identified.
- (2) Searched ZapConnect.com, a medical device database. The database is composed of over 87,000 medical devices registered with the Food and Drug Administration. Two searches were conducted and 121 records matched. Many of the companies from the 121 records were not manufacturers of extrication devices, or were manufacturers of medical devices not relevant to this test (e.g., stretchers for hospital use only). Seventeen manufacturing companies were identified.
- (3) Approximately 16 man-hours were spent on keyword searches of the Internet. Four additional manufacturing companies were identified.

c. Professional Associations

- (1) Researchers reviewed the EMS Today Exhibitor List. In March 2003 the 21st annual EMS Today Exposition and Conference was held. The Internet site www.jems.com posted a list with 152 exhibitors. Seven manufacturing companies were identified.
- (2) Researchers reviewed the January 2003 Fire Engineering Buyer's Guide. The buyer's guide provided names of manufacturers by trade name. Four possible manufacturers were identified.
- (3) Researchers obtained source lists of similar items from other agencies, trade associations, or other sources.

Survey Results

Overview. Twenty-six companies that produced extrication devices were contacted, of which nine responded. See Appendix A for the list of manufacturers contacted. In addition, four companies responded to the Sources Sought Notice posted on the Vendors Federal Business Opportunity website.

- Thirteen manufacturers submitted 25 models for RAVUE consideration. (See Appendix D.)
- Fourteen models appear appropriate for inclusion in the RAVUE. (See Table 1 below.)
- Eleven models submitted were not extrication devices. (See paragraph below.)
- One company (Web Devices) did not nominate a specific device for testing.

Non-Conforming Nominees. Eleven models nominated by the manufacturers listed below are not "non-motorized" extrication devices used "to transport victims" as specified in the Sources Sought Notice or the letters to the vendors (see Appendices B & C), therefore, they are not recommended for inclusion in he RAVUE field test. Additionally, vendor nominations which may be received after May 7, 2004, are not included.

- Fascut Industries, LOBSTER Model EHC-16PCU Cordless Handheld Steel Bar
- Galaxy Scientific Corporation, Portable Emergency Lighting System
- Hartwell Medical, FASTSPLINT
- Hartwell Medical, Emergency Isothermal Blanket
- Minto Research & Development, Inc., Sager Emergency Traction Splint S304
- Morrison Medical, #1390OR Disposable Backboard Straps
- Morrison Medical, #1465 Head Vise II
- Morrison Medical, #1383X Gemini Strap System
- NxGenUSA,LLC, Reactive Body Armor with Rapid ID-Capture/BioMetric-ID-Telemetry
- Rapid Deployment Products, Pro-Lite Speedboard (710)
- SKEDCO, SK-2520 Skyhook WMD/HAZMAT Patient Evacuation System

Conforming Nominees. Information on the extrication devices recommended for RAVUE Extrication Devices assessment are described in Table 1. In analyzing the products nominated by the vendors, it was noted that several items, especially those manufactured by a single vendor, are similar in construction and performance. In analyzing the products nominated, they are generally found to fall into three movement categories.

- Drag-type devices
- Carry devices
- Extrication chairs

In analyzing the individual nominations, it was noted that in several cases a manufacture has several models that are essentially identical in design and/or function as they might be used under RAVUE test conditions. Therefore, the CDP recommends that a "top-of-the-line" model from these vendors be tested. Where this occurs, the assessment report will include remarks about other similar models offered and their potentially similar performance.

The Test Plan is being prepared to assess performance in accordance with the evaluation criteria recommended by the Responder Focus Group that met on April 7, 2004, and incorporating the three categories indicated above.

Market Survey Summary

Of the fourteen conforming items listed in Table 1 below, nine are litter or carry type devices, three are drag devices, and one is an extrication chair. Of the nine carry devices, there are five manufacturers submitting candidates for RAVUE assessment. Accordingly, one "top-of-the-line" carry device from each of the five manufacturers is recommended for inclusion in the June 2004, RAVUE assessment as shown in the shaded sections of Table 1. Each of the three drag devices and the one extrication chair are also recommended for comparative assessment.

 Table 1. RAVUE Equipment Specifications

Company	Model	Туре	Length	Width	Height	Weight	Load Limit	Storage Dimension	Responders Required
Activeaid, Inc.	#40B4C.I.D.	Carry	70 1/8 "	16"	N/A	24 lbs	500 lbs	Non-folding	2 Minimum
Arizona Industries for the Blind	Decontaminable Folding Pole Litter	Carry	83 1/2"	22 3/8"	Not Provided	Not Provided	Not Provided	83 1/2" x 6" x 6 1/2"	2 Minimum
Hartwell Medical Corporation	CombiCarrier	Carry	73"	16.5″	2.5″	18 lbs	400 lbs	Non-folding	2 Recommended
Henley Board, Inc.	Henley Spinal Immobilization Device HB1010	Carry	73"	16"	1 1/2"	20 lbs	400 lbs	Non-folding	2-4
Henley Board, Inc.	Henley Disaster Board HB1037	Carry	70 1/2"	16"	3/4"	18 lbs	250 lbs	Non-folding	2-4
LifeSlider, Inc.	LS100 LifeSlider	Drag	54"	24"	9"	21 lbs	None Stated	Same	1
Rapid Deployment Products, Inc.	Pro-Lite Spineboard (716)	Carry	72"	16" Top, 14" Bottom	2"	11-14 lbs	1000 lbs	N/A	2-4
Rapid Deployment Products, Inc.	Pro-Lite Spineboard (717)	Carry	72"	16" Top, 14" Bottom	2"	11-14 lbs	1000 lbs	N/A	2-4
Rapid Deployment Products, Inc.	Pro-Lite Spineboard (719)	Carry	72"	16" Top, 14" Bottom	2"	11-14 lbs	500 lbs	N/A	2-4

Shaded items are those recommended for RAVUE assessment

Table 1. RAVUE Equipment Specifications

Company	Model	Туре	Length	Width	Height	Weight	Load Limit	Storage Dimension	Responders Required
Rapid Deployment Products, Inc	Pro-Lite Pedi-Lite (721)	Carry	48"	12"	1.75"	8 lbs	Unlimited	N/A	1-2 Trained
Rapid Deployment Products, Inc	MP Carrier (722)	Carry	86	28″	8.86"	33 lbs	1000 lbs	N/A	2-6
Red Sled, Inc.	RED SLED	Drag	35"	18″	17"	58 lbs	3500 lbs	N/A	1
Skedco, Inc.	HMD Sked	Drag	8'	3'	Flat	19 lbs with accessories	5,800 (Tensile Strength)	9 X 36"	1-2
Stryker Medical	Model 6253 Evacuation Chair	Chair	N/A	20.5″	45"	34 lbs	400 lbs	11" depth	1 Minimum, 2 Maximum

Shaded items are those recommended for RAVUE assessment

This appendix lists the manufacturers of extrication devices that were contacted.

ACTIVEAID, Inc.

101 Activeaid Road, Box 359 Redwood Falls, MN 56283-0359 Tel: 507-644-2951 or 800-533-5330

Fax: 507-644-2468

Allied Healthcare Products, Inc.

1720 Sublette Avenue St. Louis, MO 63110

Tel: 314-771-2400 or 800-444-3954

Arizona Industries for the Blind

3013 West Lincoln Street Phoenix, AZ 85009-5797 Tel: 602-269-5131

Fax: 602-269-9462

Bodan

C/O 16/F Standard Chartered Bank Bldg 4-4A Des Voeux Road Hong Kong

Cameron-Miller, Inc.

3949 South Racine Chicago, IL 60609

Tel: 312-523-6360 or 800-621-0142

Fax: 312-523-9495

DMS

600 South Kiwanis, Suite 319 Sioux Falls, SD 57104

Emergencia 2000 Inc.

8574 NW 70th Street Miami, FL 33166 Tel: 305-594-9904

Emergency Products and Research

890 West Main Street Kent, OH 44240-2218

Tel: 800-3-BAK-PAK or 330-673-5003

Fax: 330-673-4940

Firehouse Medical, Inc.

1035 N. Armando Street, Suite C Anaheim CA. 92806

Tel: 800-508-9919 (Toll free, US only) or 714-688-

1575

Fax: 714-688-1577

Hartwell Medical Corporation

6352 Corte del Abeto, Suite J Carlsbad, CA 92009-1408

Tel: 760-438-5500 or 800-633-5900

Fax: 760-438-2783

Henley Board, Inc.

213 Crabb Avenue Rockville, MD 20850 Tel: 800-874-0552 Fax: 301-865-1799

Innovative Products Unlimited

4351 W. College Avenue, Suite 505

Appleton, WI 54914

Tel: 920-738-9090, 800-424-3369

Fax: 920-738-9050

Iron Duck Corporation

A Division of Fleming Industries 20 Veterans Drive Chicopee, MA 01022 Tel: 800-669-6900

Junkin Safety Appliance Co.

3121 Millers Lane Louisville, KY 40216 Tel: 502-775-8303 Fax: 502-772-0548

Laerdal Medical Corporation

167 Myers Corners Road Wappingers Falls, NY 12590 Tel: 877-LAERDAL (523-7325)

Appendix A: List of Manufacturers Contacted

LifeSlider, Inc.

25553 61st Road Arkansas City, KS 67005

Tel: 888-442-4543 Fax: 620-442-2320

Minto Research & Development, Inc.

20270 Charlanne Drive Redding, CA 96002 Tel: 800-642-6468

Fax: 530-222-0679

Modern Rescue & Safety Equipment Inc.

3111 Hines Chapel Road Greensboro, NC 27405 Tel: 910-375-6245

Morrison Medical

610 West Town Street Columbus, OH 43215-4446

Tel: 614-461-4400 Fax: 614-469-9696

North American Rescue Products

126 Hornbuckle Drive Easley, SC 29642 Tel: 864-220-3004

Fax: 864-220-3822

Rapid Deployment Products, Inc.

7 Titus Avenue Richboro, PA 18954

Tel: 877-433-7569; 215-953-9190

Fax: 215-354-1413

Red Sled, Inc.

3397 S.W. 44th Court Ft. Lauderdale, FL 33312

Tel: 954-322-6997 Fax: 954-983-9724

Reeves Manufacturing

1704 West 7th Street Frederick, MD 21702 Tel: 800-328-5563 Fax: 301-698-1599

Skedco, Inc.

P.O. Box 230487 Portland, OR 97281 Tel: 503-639-2119 Fax: 503-639-4538

Stryker Medical

6300 S. Sprinkler Road Kalamazoo, MI 49001-9799

Tel. 800-STRYKER (787-9537) or 269-329-2100 Fax: 800-FAX-STRY (329-7879) or 269-329-2311

Techlem Medical Corporation

6890 Pacific Circle
Mississauga, Ontario L5T 1N8
Canada

Appendix B – Letter to Manufacturers

This appendix contains a copy of the letter and survey sent to manufacturers identified in Appendix A.

April 5, 2004

Dear Sirs:

The Office for Domestic Preparedness under the Department of Homeland Security is conducting an enduser functionality and efficacy test for emergency response extrication devices. Currently we are looking for extrication devices to include in the User Testing and Evaluation Program (UTEP).

The intent of the UTEP is to provide the emergency response community user feedback and evaluation of equipment. The evaluation will be based on utilization of each piece of selected equipment in scenarios that replicate, to the maximum extent possible, conditions that will be experienced during an incident response. The results of testing will not yield a determination of what product is "best," nor shall the Center for Domestic Preparedness (CDP) endorse any product or manufacturer. The test results will be published and available to the emergency response community.

The extrication devices being tested are the type that would be used by emergency responders while wearing Level A ensembles to transport victims, without motorized assistance, from the Hot Zone to the decontamination point in the Warm Zone in a mass casualty event.

The test will be performed at the CDP by evaluators selected from the student population. The student population consists of emergency responders from all disciplines representing agencies and jurisdictions across the United States. These evaluators are the actual users of the equipment in the field. They will be presented with specific scenarios and tasks to be carried out using the equipment. The scenarios will be tailored so that evaluated criteria can be objectively and subjectively assessed by each evaluator. Some of the criteria could include: usability, portability, train-up time, ergonomics, required manpower, maintenance, ease of use, and practicality.

If you wish to identify your particular brand/product for testing in this user test program, please provide in electronic (MSWord) format your company name, address, point of contact, telephone, fax, and e-mail address to the undersigned. In addition, send device information such as specifications (e.g., length, width, height, weight, load limit, etc.), reliability, maintainability, support supply, shelf life, durability, any special storage or transportation requirements, environmental limits, and safety reports.

Do not send your piece of equipment. Selected equipment will be purchased from distributors/suppliers as the equipment is selected for testing.

Appendix B – Letter to Manufacturers (Continued)

Please respond by email to Debbie Noojin at <u>Deborah.Noojin@dhs.gov</u> or by mail to Debbie Noojin, Center for Domestic Preparedness, P.O. Box 5100, Anniston, Alabama 36205. Responses should be submitted no later than April 22, 2004. Feel free to attach brochures or any other information you feel is important.

Whenever possible, all proposed items submitted for testing will be included in the test; however, when available candidates exceed the number that can be effectively assessed in one test, an internal focus group will be convened to screen the candidate items based on objective criteria to reduce the number. The focus group can use the survey/material during the selection process. Manufacturers will be notified of the final selection.

If you have any questions, feel free to contact Deborah Noojin, email deborah.noojin@dhs.gov, telephone 256-847-2095, fax 256-847-2323 or by mail at the above address.

Sincerely,

Deborah Noojin Contracting Officer

Attachment 1 Survey

Attachment 1 – Survey

User Testing and Evaluations Program (UTEP) – Extrication Devices Questionnaire

Name:
Company:
Date:
Phone Numbers:
Individual submitting:
Model number and name of extrication device your company wants to have included in the User Testing and Evaluation Program.
2. What is your title?
3. What is your primary responsibility in your organization?
 4. Device Specifications: a. Length:
5. Does this device have operational environmental limits (e.g., temperature, humidity, etc.) and if so, what are they?

Appendix B – Letter to Manufacturers (Continued)

6.	Does this device have any special storage requirements and if so, what are they?
7. etc	
8.	What is the projected shelf life of this device?
9. pre	Who is this device designed to transport (e.g., children 2 years or older, infants, child and adult sizes, egnant women, etc.)?
10	Number of personnel required to operate the device?
11	Have field tests been conducted under operational conditions to determine its effectives and suitability?

Appendix B – Letter to Manufacturers (Continued)

12. Does your company control all replacement parts/repair parts for this device?
13. Do you provide a warranty with this product and if so, how long?
14. Is the device registered with the Food and Drug Administration?
15. Other features:

Appendix C – Sources Sought Notice

This appendix contains a copy of the Sources Sought Notice posted on the Vendors Federal Business Opportunity website

42 -- User Testing and Evaluation Program. Emergency response extrication devices.

General Information

Document Type: Sources Sought Notice Solicitation Number: 2004-S-S001

Posted Date: Mar 22, 2004

Original Response Date: Apr 22, 2004 Current Response Date: Apr 22, 2004 Original Archive Date: May 07, 2004 Current Archive Date: May 07, 2004

Classification Code: 42 -- Fire fighting, rescue & safety equipment Naics Code: 339999 -- All Other Miscellaneous Manufacturing

Contracting Office Address: DHS - Border and Transportation Security, Office for Domestic Preparedness, OJP/Center for Domestic Preparedness, 61 Responder Drive, Anniston, AL, 36205

Description: This is a SOURCES SOUGHT REQUEST. This is not a request for proposals and does not obligate the Government to award a contract. The Office for Domestic Preparedness is conducting an enduser functionality and efficacy test for emergency response extrication devices and is inviting manufacturers to participate.

The intent of the user test program will be to provide the emergency response community user feedback and evaluation of equipment based on utilization of each piece of equipment selected in scenarios that replicate, to the maximum extent possible, conditions that will be experienced in incident response. The results of testing will not yield a determination of what product is best, nor shall the Center for Domestic Preparedness (CDP) endorse any product or manufacturer.

The types of extrication devices being tested are ones that would be used by emergency responders while wearing Level A ensembles without motorized assistance to transport victims in a mass casualty event from the Hot Zone to the decontamination point in the Warm Zone.

The tests will be performed at the CDP by evaluators from the emergency response population, representative of all disciplines of agencies and jurisdictions across the US. These evaluators will be actual users of the equipment in the field. The evaluators will be presented with specific scenarios and tasks to be carried out using the equipment. The scenarios will be tailored so that evaluated criteria can be objectively and subjectively assessed by each evaluator. Some of the criteria could include: usability, portability, trainup time, ergonomics, required manpower, maintenance, ease of use and practicality.

If you wish to identify your particular brand/product for potential testing in this user test program, please provide in electronic (MS Word) format, your company name, address, point of contact, telephone, fax and e-mail address. Additionally, send device information such as specifications (e.g., length, width,

Appendix C – Sources Sought Notice (Continued)

height, weight, load limit, etc), reliability, maintainability, support supply, shelf life, durability, any special storage or transportation requirements, environmental limits and safety reports.

Do not send your piece of equipment. Selected equipment will be purchased from distributors/suppliers ad the equipment is selected for testing.

Respond by e-mail to Debbie Noojin at Deborah.Noojin@dhs.gov or my mail to Debbie Noojin, Center for Domestic Preparedness, P. O. Box 5100, Anniston, AL 36205

Original Point of Contact: Deborah Noojin, Contracting Officer, Phone 256-847-2095, Fax 256-847-2323, Email noojind@ojp.usdoj.gov

Place of Performance: 61 Responder Drive Anniston, AL 36205 USA

Appendix D – Manufacturers' Response Summaries

The appendix contains the responses from the all manufacturers.

Table D - 1. Manfacturers' Responses

Company	Model	Survey	Other Information Submitted
Activeaid, Inc.	#40B4C.I.D. Spineguard®	Yes	Product Information Sheet Warranty Sheet
Arizona Industries for the Blind	Decontaminable Folding Pole Litter	Yes	Product Information Sheet
Fascut Industries	LOBSTER Model EHC-16PCU Cordless Handheld Steel Bar	No	E-mail Letter
Galaxy Scientific Corporation	Portable Emergency Lighting System	No	LetterPPT
Hartwell Medical	FASTSPLINT	No	E-mail with information
Hartwell Medical	Emergency Isothermal Blanket	No	E-mail with information
Hartwell Medical	CombiCarrier	No	E-mail with information
Henley Board, Inc	Henley Spinal Immobilization Device HB1010	Yes	• Fax
Henley Board, Inc	Henley Disaster Board HB1037	Yes	• Fax
Life Slider, Inc.	LS100	Yes	Fax Market Research Analysis
Minto Research & Development, Inc.	Sager Emergency Traction Splint S304	Yes	Instructor Manual Portfolio Training Video Studies to include Cadaver Study
Morrison Medical	#1390OR Disposable Backboard Straps	Yes	Letter Catalog
Morrison Medical	#1465 Head Vise II	Yes	Letter Catalog
Morrison Medical	#1383X Gemini Strap System	Yes	Letter Catalog

Table D - 1. Manfacturers' Responses (Continued)

Company	Model	Survey	Other Information Submitted
NxGenUSA, LLC	Reactive Body Armor with Rapid ID- Capture/BioMetric-ID-Telemetry	No	E-mail Letter
Rapid Deployment Products, Inc.	716K, 717K, 719K Pro-Lite Spineboard	Yes	Literature Article
Rapid Deployment Products, Inc.	710K Pro-Lite Speedboard (Short Rapid Extrication Device)	Yes	Literature Article
Rapid Deployment Products, Inc.	721K Pro-Lite Pedi-Lite Pediatric Immobilization Kit	Yes	Literature
Rapid Deployment Products, Inc.	722 Multi-Purpose Rescue Sled	Yes	Literature
Red Sled, Inc.	R315	Yes	Letter CD
Skedco, Inc.	Mass Casualty/Haz-Mat Sked Stretcher	No	LetterVHS VideoDVDBrochuresCatalogsPricelist
Skedco, Inc.	SK-2520 Skyhook WMD/ HAZMAT Patient Evacuation System	Yes	LetterVHS VideoVCDBrochuresCatalogsPricelist
Stryker	Model 6253 Evacuation Chair	Yes	• Fax
Web Devices		No	Brochure Price List

Appendix E– Questionnaire Information on Conforming Nominees

This appendix contains the appelling questionneirs recognize information submitted by manufacturers in

This appendix contains the specific questionnaire response information submitted by manufacturers in nominating their products for the RAVUE extrication devices comparative assessment. The original vendor submissions will be maintained at the CDP until April 30, 2006. Table 1 is the manufacturer contact list; Table E-2 - Survey Questions 1-4; Table E-3 - Question 5-10 responses; and Table E-4 - Question 11-15 responses.

Table E-1. RAVUE Equipment Point of Contact List

Company	Model Number/Name	Name	Phone Number	Title	Responsibility
Activeaid, Inc.	• #40B4C.I.D./Spineguard	Charles Nearing	507-644-2900	VP, Chief Operating Officer	Owner
Arizona Industries for the Blind	NSN 6530-01-380-7309/ Decontaminable Folding Pole Litter	Les Anderson	602-269-5131 FAX: 602-269-5131	Manufacturing Manager	Manager
Hartwell Medical	CombiCarrier®	Owen Cashman	760-438-5500 FAX: 760-438-2783	Marketing Assistant	Advertising and media planning/buying; corporate PR, product testing and evaluation, and new product development
Henley Board, Inc.	 HB1010/Henley Spinal Immobilization Device HB1037/Henley Disaster Board 	A.F. Henley, Jr.	800-874-0552	President	
Lifeslider, Inc.	• LS100	Mark Strickland	620-442-4543 888-442-4543	Sales Director	Sales, Distribution, and Promotion
Rapid Deployment Products, Inc.	 716/Prolite Spineboards 717/Prolite Spineboards 719/Prolite Spineboards 721/Prolite Pedi-Lite Pediatric Immobilization Kit 722/Multi-Purpose (MP) Rescue Carrier 	Thomas Richmond	215-953-9190	Vice President	R&D and Sales
Red Sled, Inc.	R31S/RED SLED	Donna Peplin	954-448-5221	Owner	
Skedco, Inc.	Mass Casualty/Haz-Mat Sked	Bud Calkin	503-639-2119 FAX: 503-639-4538	General Manager/Vice President	
Stryker Medical	Model 6253/Evacuation Chair	Michelle Wigley	269-324-6567	Product Manager	Marketing, Product Management

Table E-2. RAVUE Equipment Specification (Survey Questions 1-4)

		Device Specification										
Company	Model Number/Name	Length	Width	Height	Weight	Load Limit	Available Colors	Folded Specifications				
Activeaid, Inc.	#40B4C.I.D./Spineguard	70 1/8″	16"		24 lbs	500 lbs	White	Non-folding				
Arizona Industries for the Blind	NSN 6530-01-380-7309/ Decontaminable Folding Pole Litter	74"	22 3/8"	6′			Black, Green	83.5" X 6" X 6.5"				
Hartwell Medical	CombiCarrier®	73″	16.5″	2.5"	18 lbs	400 lbs	Aquamarine	N/A				
Henley Board, Inc.	HB1010/Henley Spinal Immobilization Device	72"	16"	1 ½"	20 lbs	400 lbs	Natural Wood	N/A				
Henley Board, Inc.	HB1037/Henley Disaster Board	70 ½″	16"	3/4"	18 lbs	250 lbs	Natural Wood	N/A				
Lifeslider, Inc.	LS100	54″	24"	9"	21 lbs	Not Stated	Black, Orange	N/A				
Rapid Deployment Products, Inc.	716/Prolite Spineboards 717/Prolite Spineboards 719/Prolite Spineboards	72"	16" Top 14" Bottom	2"	11-14 lbs	716/717: 1000 lbs; 719: 500 lbs	Orange, White, Yellow, Blue, Red, Black, Green	N/A				
Rapid Deployment Products, Inc.	721/Prolite Pedi-Lite Pediatric Immobilization Kit	48″	12″	1.75″	8 lbs	Unlimited	Neon Green					
Rapid Deployment Products, Inc.	722/MP Carrier	86″	28"	8.86"	33 lbs	1000 lbs	Orange	N/A				
Red Sled, Inc.	R31S/RED SLED	35″	18"	17"	58 lbs	3500 lbs	Black					
Skedco, Inc.	Mass Casualty/Haz-Mat Sked ¹	8′	3'		19 lbs	Robe tensile 5800 lbs		9" X 36"				
Stryker Medical	Model 6253/Evacuation Chair		20.5"	45"	34 lbs	400 lbs	Grey	11" depth				
			NOTES		•							
¹ Company did not provide survey, i	ntormation obtained from product information	on sheet.	Company did not provide survey, information obtained from product information sheet.									

Table E-3. RAVUE Equipment Specifications (Survey Questions 5 – 10)

Activeaid, Inc. #4084C.I.D./Spineguard No No No No No No None Addescent children and adults No limit Adolescent children and adults No limit Adolescent children and adults No limit Adolescent children and adults No No None All 2 Hartwell Medical CombiCarrier® No No No Entire victim Indefinitely (> 50 years) Hartwell Medical CombiCarrier® No No No Entire victim Indefinitely (> 50 years) Hartwell Medical CombiCarrier® No No No Entire victim Indefinitely (> 50 years) Hartwell Medical CombiCarrier® No No No Entire victim Indefinitely (> 50 years) Hartwell Medical CombiCarrier® No No No Proposition and quick transport N/A Children and adults 2 for carrying Proposition and quick transport N/A Children and adults 2 for carrying No No No Proposition and quick transport N/A Children and adults 2 for carrying No No No Proposition and quick transport N/A Children and adults 2 for carrying No No No Proposition and quick transport N/A Children and adults 2 for carrying No No No No Proposition and quick transport N/A Children and adults 2 for carrying No No No No Proposition and quick transport N/A Children and adults 2 for carrying No	Company	Model Number/Name	Operational Environmental Limits	Special Storage Requirements	Immobilization of Victim	Shelf Life	Intended Personnel	Responders Required			
Hartwell Medical Hartwell Medical Henley Board, Inc. History Disaster Board Henley Board, Inc. Lifeslider, Inc. Lifeslider, Inc. Lifeslider, Inc. Rapid Deployment Products, Inc. Rapid Deployment Rapid Deployment Rapid Deployment Products, Inc. Rapid Deployment Rapid Depl	Activeaid, Inc.	#40B4C.I.D./Spineguard	No	No		No limit		Minimum of 2			
Henley Board, Inc. Lifeslider, Inc. Lifeslider, Inc. Lifeslider, Inc. Rapid Deployment Products, Inc. Rapid Deployment Products, Inc. Rapid Deployment Products, Inc. Rapid Deployment Products, Inc. Rapid Deployment Products, Inc. Rapid Deployment Products, Inc. Rapid Deployment Products, Inc. Rapid Deployment Products, Inc. Rapid Deployment Products, Inc. Rapid Deployment Products, Inc. Rapid Deployment Products, Inc. Rapid Deployment Products, Inc. Rapid Deployment Products, Inc. Rapid Deployment Products, Inc. Rapid Deployment Products, Inc. Rapid Deployment Products, Inc. Rapid Deployment Products, Inc. Rapid Deployment Products, Inc. Rapid Deployment Products, Inc. Rapid Deployment Products, Inc. Rapid Deployment Products, Inc. Rapid Deployment Products, Inc. Rapid Deployment Products, Inc. Rapid Deployment Products, Inc. Rapid Deployment Products, Inc. Rapid Deployment Products, Inc. Rapid Deployment Products, Inc. Rapid Deployment Products, Inc. Rapid Deployment Products, Inc. Rapid Deployment Products, Inc. Rapid Deployment Products, Inc. Rapid Deployment Products, Inc. Rapid Deployment Products, Inc. Rapid Deployment Products, Inc. Rapid Deployment Products, Inc. Rapid Deployment Products, Inc. Rapid Deployment Products, Inc. Rapid Deployment Products, Inc. Rapid Deployment Products, Inc. Rapid Deployment Products, Inc. Rapid Deployment Products, Inc. Rapid Deployment Products, Inc. Rapid Deployment Products, Inc. Rapid Deployment Products, Inc. Rapid Deployment Products, Inc. Rapid Deployment Products, Inc. Rapid Deployment Products, Inc. Rapid Deployment Products, Inc. Rapid Deployment Products, Inc. Rapid Deployment Products, Inc. Rapid Deployment Products, Inc. Rapid Deployment Products, Inc. Rapid Deployment Products, Inc. Rapid Deployment Products, Inc. Rapid Deployment Products, Inc. Rapid Deployment Products, Inc. Rapid Deploy		Decontaminable Folding	No	No	No	None	All	2			
Henley Board, Inc. Henley Board, Inc. Henley Board, Inc. Lifeslider, Inc. Tife/Prolite Spineboards 717/Prolite	Hartwell Medical	CombiCarrier®	No	No	Entire victim		All patients				
Henley Board, Inc. Lifeslider, Inc. Rapid Deployment Products, Inc. No (aluminum) No Head, Inc. Individuals < 400 lbs who are immobilized inmmobilized inmediates and cover in products, Inc. Rapid Deployment Products, Inc. No No No No Yes - head to toe No Limited Infants, Children and adults and children Infants, Children and adults and children inmide Infants, Children and adults and children inmide Infants,	Henley Board, Inc.	Immobilization Device	No	No	immobilization	N/A	Children and adults	2 for carrying			
Lifeslider, Inc. LS100 No No No No No Regid Deployment Products, Inc. Rapid Deployment Products, Inc. No No No No Yes – head to toe No Limits Infants, children and adults any size Infants and children 1-2 trained rescuers No No Head, foot and mid extremities Lifetime with proper care (2+) 1 Skedco, Inc. Skedco, Inc. Model 6253/Evacuation Chair No Optional storage bracket and cover available Products inc. No No No No No No No No No N	Henley Board, Inc.		No	No	quick transport	N/A	Children and adults	2 for carrying			
Rapid Deployment Products, Inc. No No No No Yes - head to toe No Limits Infants and children 1-2 trained rescuers None All 2-6 Rall Products, Inc. Red Sled, Inc. RallS/RED SLED No (aluminum) No No Head, foot and mid extremities Figure Stryker Medical Nodel 6253/Evacuation Chair No Water - use special care Optional storage bracket and cover available Products, Inc. No No No No No No Head, Iap, foot, and children foot, and chi	Lifeslider, Inc.	LS100	No	No	leg; head strap available; A head/C-collar can be	Unlimited	All	1			
Rapid Deployment Products, Inc.721/Prolite Pediatric Immobilization KitNoNoYes - head to toeNo LimitsInfants and children1-2 trained rescuersRapid Deployment Products, Inc.722/MP CarrierNoNoYes - entire body for transportNoneAll2-6Red Sled, Inc.R31S/RED SLEDNo (aluminum)NoHead, foot and mid extremitiesLifetime with proper careAdults and children (2+)1Skedco, Inc.Mass Casualty/Haz-Mat Sked¹Usable to 120°FStryker MedicalModel 6253/Evacuation ChairIce, water -use special careOptional storage bracket and cover availableHead, lap, foot, and chest restraints available7 years daily use, 7 transfers per dayIndividuals < 400 lbs who are immobilized2 maximum - depending on load		717/Prolite Spineboards	No	No	Yes – head to toe	Unlimited	•	2-4			
Products, Inc. Red Sled, Inc. R31S/RED SLED No (aluminum) No Head, foot and mid extremities From the street of the street			No	No	Yes – head to toe	No Limits	Infants and children	1-2 trained rescuers			
Red Sled, Inc. R31S/RED SLED No (aluminum) No extremities proper care (2+) 1 Skedco, Inc. Skedd Usable to 120°F Stryker Medical Model 6253/Evacuation Chair No (aluminum) No extremities proper care		722/MP Carrier	No	No		None	All	2-6			
Stryker Medical Sked¹ Usable to 120°F Ice, water –use special care Stryker Medical Stryker Medical Sked¹ Usable to 120°F Ice, water –use special care Optional storage bracket and cover available Head, lap, foot, and chest restraints available 7 years daily use, 7 transfers per day Individuals < 400 lbs who are immobilized 2 maximum – depending on load	Red Sled, Inc.	R31S/RED SLED	No (aluminum)	No				1			
Stryker Medical Chair lice, water – use special care special care bracket and cover available lice, water – use special care bracket and cover available lice, water – use special care bracket and cover available lice, water – use special care bracket and cover available lice, water – use special care bracket and cover available lice, water – use special care bracket and cover available lice, water – use special care bracket and cover available lice, water – use special care lice, water – use	Skedco, Inc.		Usable to 120°F								
NOTES	Stryker Medical			bracket and cover available	chest restraints available	use, 7 transfers	lbs who are				
¹ Company did not provide survey, information obtained from product information sheet.	1Company did not provide	NOTES									

Table E-4. RAVUE Equipment Specifications (Survey Questions 11 – 15)

			Replacement/		FDA				
Company	Model Number/Name	Field Tests	Repair Parts	Warranty	Registration	Other			
Activeaid, Inc.	#40B4C.I.D./Spineguard	Yes – Used since 1971	Yes	1 year	Yes	Literature provided.			
Arizona Industries for the Blind	NSN 6530-01-380-7309/ Decontaminable Folding Pole Litter	Yes – US Army	Yes						
Hartwell Medical	CombiCarrier®	Yes - Clinically tested and used nationwide	Yes	2 years	Yes	Product sheets provided			
Henley Board, Inc.	HB1010/Henley Spinal Immobilization Device	Yes – used for 20 years	Yes	1 year	Yes	The only self-locking head/neck stabilization device in the US.			
Henley Board, Inc.	HB1037/Henley Disaster Board	Yes – have been used	Yes	1 year	Yes	They come in sets of 3 and are the only re-usable mass casualty board in the US.			
Lifeslider, Inc.	LS100	Yes – letter from Aztech, Inc. provided	Yes	2 years	No	Maintenance free design; lightweight and durable, portable and easy to use. Padded seat. Removable seat for easy cleaning. Padded headrest available. 16' lanyard.			
Rapid Deployment Products, Inc.	716/Prolite Spineboards 717/Prolite Spineboards 719/Prolite Spineboards	Yes – Worldwide	Yes	Lifetime under normal usage	No	Literature provided.			
Rapid Deployment Products, Inc.	721/Prolite Pedi-Lite Pediatric Immobilization Kit	Yes	Yes	Lifetime under normal usage	No	Kit comes with: Board, CID, C-Collar, Carry case, 4 color coded straps, and head/chin tapes			
Rapid Deployment Products, Inc.	722/MP Carrier	Yes – ice, snow, mud, water and Haz Mat	Yes	Lifetime	No	Literature provided.			
Red Sled, Inc.	R31S/RED SLED	Yes	Yes	Lifetime	No	One rescuer to one victim; also has the ability to be used by 2 rescuers to go up and down stairs with telescopic handles; decontaminable			
Skedco, Inc.	Mass Casualty/Haz-Mat Sked ¹								
Stryker Medical	Model 6253/Evacuation Chair	Yes – Information attached	Yes	2 years: parts; 1 year service and travel	Yes	Kevlar belt operates with Stair-Tread™ system to absorb patient weight down stairs.			
			NOTE	ES					
¹ Company did not provide survey, information obtained from product information sheet.									